

FILTER SELECTION DATA SHEET

PURO CELL

Carbon loaded rigid box filter

Purolator Filtration Systems

Product features

The PURO CELL[®] filter is a rigid box-type filter engineered to provide medium and high-efficiency filtration combined with odor control. Its construction eliminates the need for retainers and special external wire media supports. A high surface area-to-depth ratio provides the maximum amount of effective filter media in areas of minimum in-line duct space. These carbon-loaded pleated box filters clean the air by removing airborne molecular contaminants present at levels less than one particle per million.

- Hi efficiency: Small (20 x 50 mesh) carbon particles and pleated configuration maximize adsorbent surface area
- Low pressure drop: Uniform dispersion of carbon throughout media, not just on surface, lets air flow freely
- Longer filter life, minimal shedding/dusting: thermal bonding of media to carbon exposes maximum adsorbent surface area
- More adsorbent: pound for pound, our carbon media is six times more effective than competitive carbons

Applications

The Purolator PURO CELL filter contains highly activated carbon for high efficiency in low concentration applications. Specific applications include air conditioning filters, furnace filters, heating vents, air intakes, air purification devices, and ozone removal devices.

Appropriate end users are those involved with filtration of hospital facilities, chemical plant offices/labs, pollution control areas, sewage disposal and waste management plant offices, airports, kitchens and restaurants, or commercial offices. Critical manufacturing industries (including pharmaceuticals, microelectronics, and cleanrooms) require top-quality air filtration products like the PURO CELL filter to remove low level concentrations of gases.

Frame Construction

The PURO CELL perimeter frame is constructed of high strength, corrosion-resistant, galvanized steel. To prevent air bypass, the filter pak is sealed to the frame on all sides. Filter integrity is maintained by pleat stabilizers which are bonded to both the air entry and air exit sides of the pak.



Media and Backing

Each PURO CELL filter is loaded with 600 grams/sq. meter (GSM) of superior 90% active, 20 x 50 mesh-size carbon particles. Our top-grade carbon provides six times the adsorbent surface area of standard GAC carbon, making it vastly more effective, efficient, and long-lasting.

No adhesive is used in the media: Fine mesh carbon granules are bonded to the synthetic fibers by a unique thermal process that requires no adhesive, and blinds less than 1.5% of each carbon particle's effective surface area. As a result, more than 98.5% of the carbon's surface is exposed to contaminated air, resulting in maximum gas adsorbing capacity and efficiency. This bonding method also features minimal dust release.


Purolator[®]
Air Filtration

Pleat Configuration

To achieve a maximum dust holding capacity while minimizing pressure loss and replacement frequencies, the PURO CELL incorporates aerodynamically wedge-shaped pleats into its design. The expanded metal backing and stationary die-cut pleat spacers allow consistent pleat configuration. The pleated configuration of the PURO CELL filter's media also increases the filter's exposed surface area, thereby providing a higher overall efficiency by expanding its capability to adsorb contaminants.

Media Options

For special IAQ situations, specially impregnated media can be ordered. Contact our factory for more information.

1. Ammonia Impregnated Carbon: Used in blueprint facilities, photolithography, nursing homes, cleanrooms, microelectronics, and situations where pet odors are problematic.
2. Acid gas (SO₂) Impregnated Carbon: Used in cleanrooms, electronic control rooms, pulp and paper mills, and sewage treatment facilities.
3. Multipurpose Carbon: Absorbs formaldehyde, SO₂, Nox, VOCs, etc. Used for building materials, schools, libraries, hospitals, smoking lounges/bars, new construction, museums, etc.

Suggested Product Specifications

Air filters shall be the high-efficiency, deep-pleated, disposable, rigid-cell type. The filter media shall be composed of randomly oriented ultra-fine glass fibers laminated to a non-woven backing. Carbon particles shall be thermally bonded to the media. Each filter shall have no less than ____ square feet of media area.

The filter media shall be continuously bonded to a heavy-duty, 28-gauge, corrosion-resistant, electrogalvanized steel, expanded metal grid with an open face area of not less than 95%.

To inhibit dirty air bypass, the media grid assembly shall be bonded to all interior surfaces of the enclosure frame. The support grid shall be formed into a wedge configuration to optimize usage of the filter media. Pleat spacers shall be permanently installed.

The enclosure frame shall be constructed of corrosion-resistant galvanized steel in such a manner as to produce a rigid, durable filter. The filter shall be the PURO CELL as manufactured by Purolator Air Filtration.

Performance data:

PURO CELL Carbon-Loaded Rigid Box Filters

Nominal Size (WxHxD) (inches)	Actual Size (WxHxD) (inches)	Media Area (Sq. Ft.)		Carbon Weight (Lbs.)		Resistance in w.g.	
		Box Style	Header Style	Box Style	Header Style	Med. Box	High Header
24 x 24 x 12	23-3/8 x 23-3/8 x 11-1/2	73	65	9.0	8.0	.40"	.50"
12 x 24 x 12	11-3/8 x 23-3/8 x 11-1/2	36	31	4.5	4.0	.40"	.50"



207 Johnston Parkway
P.O. Box 940
Kenly, NC 27542

3800 Pell Circle
Sacramento, CA 95838

880 Facet Road
Henderson, NC 27536

212 Durham Ave.
Metuchen, NJ 08840

4101 Kimmel Dr.
Davenport, IA 52802

Toll-Free
Phone: 800-843-0116
Fax: 800-233-9696

Phone: 919-284-2046
Fax: 919-284-5696

Website:
www.purolatorair.com

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